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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,173	02/26/2004	Chang-hoon Back	1293.1988	3471

21171 7590 11/01/2006

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EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT PAPER NUMBER

2627

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/786,173

Applicant(s)

BAEK ET AL.

Examiner

Christopher R. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/28/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kadowaki (US 6,480,042) in view of Kang (US 6,597,644).

Regarding claim 14:

Kadowaki discloses an optical signal converter comprising:

an optical signal detector which detects an optical signal reflected from an optical disc in a reproduction mode and converts the detected optical signal into an electrical signal (column 6, lines 10-25);

a signal amplifier which amplifies the electrical signal according to an amplification gain (column 6, lines 35-55); and

a gain control signal generator, which generates a first control signal (Fig. 2: the switching signal) when a reproduction speed is high (column 7, lines 5-35);

a gain switcher which generates a second control signal (Fig. 2: the current generator I2) to control the amplification gain of the signal amplifier (column 7, lines 5-

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25: it switches the current source used by the amplifier, thus controlling its gain) in response to the first control signal (Fig. 2: the switching signal) and a third control signal which designates an initial amplification gain (Fig. 2: the current I1).

Kadowaki does not disclose:

wherein the gain control signal generator generates the first control signal "when a voltage level of a driving signal used to drive the optical disc exceeds a predetermined value."

However, Kadowaki does disclose that it should generate the control signal when the reproduction speed is high. Kadowaki does not disclose a means of determining when the reproduction speed is high, stating only it has "already been practically developed" (column 7, lines 5-35).

Kang discloses a means of determining the reproduction speed: monitoring the voltage level of a driving signal used to drive the optical disc (column 4, lines 15-20).

It would have been obvious to one of ordinary skill in the art to include in Kadowaki wherein the gain control signal generator generates the first control signal when a voltage level of a driving signal used to drive the optical disc exceeds a predetermined value.

The motivation would have been to implement the apparatus of Kadowaki (since Kadowaki does not disclose a means for monitoring the speed alone).

Regarding claim 15:

In Kadowaki in view of Kang a value of the third control signal corresponds to a type of the optical disc (it corresponds to a medium such a DVD-ROM: column 7, lines 5-35).

Regarding claim 16:

In Kadowaki in view of Kang the second control signal controls the signal amplifier to reduce the amplification gain in response to the first control signal (column 7, lines 5-40).

***Allowable Subject Matter***

4. Claims 1-13 are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1:

None of the prior art of record teaches or suggests generating a gain control signal when a voltage level of a driving signal used to drive the optical disc exceeds a maximum output voltage of the optical signal converter.

Here the Applicant is comparing the driving voltage of the optical disc motor with the output voltage of the optical amplifier: the prior art of record does not directly compare these two disparate signals.

This limitation in combination with the other elements of the claim renders the claim allowable over the prior art of record.

Regarding claims 2-4 and 8-10:

They are allowable due to their dependence on claim 1.

Regarding claims 5-7 and 11-13:

Claim 5 contains language similar to claim 1; claims 6, 7, and 11-13 are dependent on claim 5.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kang (US 6,407,977) adjusts signals based on velocity, as does Tateishi (US 5,045,812); Nomura (US 6,298,024) sets gain and rotation speed together.

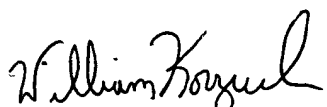
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 10/28/06

  
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